Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Encouraging the Provision of New Technologies and Services to the Public	)	GN Docket No. 18-22
	)	
	)	

COMMENTS OF COMPETITIVE CARRIERS ASSOCIATION

Competitive Carriers Association ("CCA")[1] submits these comments in response to the Federal Communications Commission's ("FCC" or "Commission") Notice of Proposed Rulemaking ("NPRM") regarding proposed procedures to implement Section 7 of the Communications Act of 1934, as amended.[2] CCA commends the FCC for exploring alternative ways to enable new technologies, but cautions that new regulations should focus on enhancing innovation and complement existing processes focused on facilitating new technologies.

DISCUSSION

The Commission has a longstanding history of developing programs and procedures aimed at introducing new technologies and services to the public.[3] Accordingly, CCA supports efforts to explore ways that Section 7 may be implemented to further encourage innovation. However, any regulations adopted by the FCC in this proceeding should be used in addition to,

[1] CCA is the nation's leading association for competitive wireless providers and stakeholders across the United States. CCA's membership includes nearly 100 competitive wireless providers ranging from small, rural carriers serving fewer than 5,000 customers to regional and national providers serving millions of customers. CCA also represents associate members that provide products and services throughout the mobile communications supply chain.

[2] *Encouraging the Provision of New Technologies and Services to the Public*, Notice of Proposed Rulemaking, GN Docket No. 18-22, FCC 18-18 (rel. Feb. 23, 2018) ("NPRM"); *see also* 47 U.S.C. § 157 (Communications Act § 7).

[3] NPRM ¶ 5.

and to enhance, these existing procedures rather than to replace or otherwise delay approval of new, innovative technologies and services.

For instance, the widely-used experimental licensing program under Part 5 of the Commission's rules plays an important role in the development of products and services. The program "allows greater flexibility for parties . . . to develop new technologies and services while protecting incumbent services against harmful interference."[4] Recently, the Commission incorporated additional flexibility through a streamlined process for institutions that regularly file experimental applications such as universities, research and development companies, and medical facilities. Moreover, the program incorporates geographic "Innovation Zones" that are available for experiments under pre-authorized conditions.[5]

A variety of companies, including many CCA members, take advantage of these opportunities: each year, the FCC's Office of Engineering and Technology grants more than 2,000 experimental licenses under the program.[6] For instance, T-Mobile has relied on the experimental licensing program to push ahead with testing efforts in the 3.5 GHz band to help better understand propagation characteristics while the FCC assesses changes to the bands.[7] Similarly, U.S. Cellular sought an experimental license to conduct testing in the 3.5 GHz band "to help determine the applicability of the spectrum to support various future wireless services."[8]

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[4] Julius Knapp, Chief, OET, *Open for Business: FCC's New Experimental Licensing System Accepting New Applications* (Apr. 14, 2017, 11:15 am), https://www.fcc.gov/news-events/blog/2017/04/14/open-business-fccs-new-experimental-licensing-system-accepting-new.

[5] *Id.*

[6] *Id.*

[7] Bevin Fletcher, *T-Mobile Requests Experimental License for 3.5 GHz Testing*, WIRELESSWEEK (Sept. 20, 2017), https://www.wirelessweek.com/news/2017/09/t-mobile-requests-experimental-license-35-ghz-testing.

[8] Monica Alleven, *U.S. Cellular Files for STA to Conduct 3.5 GHz Tests*, FIERCEWIRELESS (May 29, 2017), https://www.fiercewireless.com/wireless/u-s-cellular-files-for-sta-to-conduct-3-5-ghz-tests.

The results of these tests aid the FCC in developing licensing and operating regulations for the band, and also help service providers and manufacturers develop new equipment to avoid deployment delay.

Furthermore, other CCA members are leading the charge on 5G testing under the Part 5 rules. For example, C Spire was recently granted an experimental license to test a new modulation technique using Orthogonal Time Frequency Space Modulation ("OTFS") that was developed by Cohere Technologies as part of the proposed 5G radio interface in 3GPP.[9] OTFS "promises to deliver high spectral efficiency, no intra-cell interference, resilience to fading, multipath diversity and increased throughput."[10] C Spire also partnered with Nokia to conduct 5G fixed and mobile tests between 68 GHz and 76 GHz.[11] In short, the experimental licensing program provides competitive carriers with the opportunity to "consistently [be] out in front in terms of working with the latest technologies,"[12] and play a vital role in "fueling the economic engine of the United States and benefiting consumers."[13] This program should not be affected by new or additional FCC regulations.

In addition, the Part 15 rules play an important role with respect to the development of innovative, unlicensed operations, such as Wi-Fi, Bluetooth, Zigbee and other technologies.[14] As a stakeholder in the current competitive wireless environment, CCA has long supported

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[9] Monica Alleven, *C Spire to Test Cohere OTFS Technology*, FIERCEWIRELESS (Dec. 6, 2017), https://www.fiercewireless.com/wireless/c-spire-to-test-cohere-otfs-technology.

[10] *Id.*

[11] Diana Goovaerts, *C Spire, Nokia Team Up on 5G Tests in Mississippi*, WIRELESSWEEK (May 11, 2016), https://www.wirelessweek.com/news/2016/05/c-spire-nokia-team-5g-tests-mississippi.

[12] Monica Alleven, *C Spire to Test Cohere OTFS Technology*, FIERCEWIRELESS (Dec. 6, 2017), https://www.fiercewireless.com/wireless/c-spire-to-test-cohere-otfs-technology.

[13] NPRM ¶ 1.

[14] *Id.* ¶ 5.

exploring novel pathways towards new spectrum opportunities, including through the development of LTE-Unlicensed ("LTE-U") and Licensed Assisted Access ("LAA") under the Part 15 rules.[15] As CCA has previously advocated, LTE-U and LAA technologies will create additional opportunities for wireless carriers to gain more spectral capacity using the fast, reliable LTE service consumers have come to expect, while still being a good neighbor to other unlicensed operations like Wi-Fi.[16] It is for these reasons that competitive carriers are exploring the use of unlicensed spectrum in their operations, and can rely upon the Part 15 rules to do so. The FCC should continue to foster this innovation and allow for streamlined development of LTE-U, LAA, or any other technologies that have the potential to promote the role that unlicensed spectrum may play in increasing capacity in a competitive wireless environment.

The Commission also must be cognizant of the impact that the proposed implementation of Section 7 may have on other FCC rules and regulations. Specifically, Section 7's proposed inclusion of "applications for authorizations"[17] could result in the unintended consequence of allowing companies to gain access to valuable spectrum resources without first engaging in established competitive bidding procedures, pursuant to Section 309(j) of the Communications Act and other FCC rules.[18] This would be unjust and contrary to the public interest. Therefore, the Commission should clarify how the proposed Section 7 rules relating to "application for

[15] LTE-U is a version of commercial wireless LTE-unlicensed technology that enables mobile operators to offload data traffic onto unlicensed frequencies, using a licensed LTE channel as a primary, anchor channel for signaling. LAA is another type of LTE-unlicensed technology that "allows unlicensed spectrum to be aggregated with licensed spectrum to enhance the capacity of carrier systems" during uplink and downlink. Letter from Steve Sharkey, Chief Engineering and Technology Policy, T-Mobile, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 12-354, Att. at 6 (Mar. 13, 2015).

[16] *See* Reply Comments of Competitive Carriers Association, ET Docket No. 15-105 (filed June 26, 2015); Comments of Competitive Carriers Association, ET Docket No. 15-105 (filed June 11, 2015).

[17] NPRM ¶ 9, Appendix A Proposed Rules §1.6001(a).

[18] 47 U.S.C. § 309(j) (establishing that spectrum for commercial services must be auctioned subject to competitive bidding).

authorizations" will be applied in light of existing application processes and Section 309(j) and confirm that such language does not create new spectrum acquisition rights that will have the practical effect of avoiding the statutory competitive bidding process.

In addition to these policy considerations, the Commission also should free up additional resources that are a prerequisite to enabling the development of new technologies and services. Specifically, the Commission must continue to (1) make available more spectrum for licensed mobile wireless use; (2) eliminate burdens to infrastructure access; and (3) continue its reform of Universal Service funding.

Spectrum. Competitive carriers must have access to low-, mid-, and high-band spectrum to facilitate the introduction of new technologies and services. CCA applauds the Commission's recent efforts to explore new potential spectrum bands,[19] including millimeter wave ("mmW") spectrum and bands above 95 GHz, and reiterates the need to unlock additional spectrum for licensed mobile use.

The next spectrum auction to be held by the FCC will involve mmW spectrum. While CCA supports the FCC's proposal to first auction 28 GHz spectrum ("Auction 101") commencing on November 14, 2018,[20] it also reiterates support for auctioning all mmW spectrum simultaneously.[21] After the FCC concludes Auction 101, CCA recommends that all

[19] *See, e.g., In the Matter of Transforming the 2.5 GHz Band et al.*, WT Docket No. 18-120, Notice of Proposed Rulemaking, FCC 18-59 (rel. May 10, 2018); *Auctions of Upper Microwave Flexible Use Licenses for Next-Generation Wireless Services: Comment Sought on Competitive Bidding Procedures for Auctions 101 (28 GHz) and 102 (24 GHz)*, Public Notice, AU Docket No. 18-85 (rel. Apr. 17, 2018) ("*mmW Auction PN*"); *In the Matter of Spectrum Horizons, et al.*, Notice of Proposed Rulemaking and Order, ET Docket No. 18-21, FCC 18-17 (rel. Feb. 28, 2018); *In the Matter of Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, GN Docket No. 17-183, Notice of Inquiry, FCC 17-104 (rel. Aug. 3, 2017).

[20] *mmW Auction PN* ¶ 11.

[21] *See* Letter from Rebecca Murphy Thompson, EVP & GC, CCA to Marlene H. Dortch, Secretary, FCC, AU Docket No. 18-85 (Apr. 11, 2018).

remaining and available mmW bands should be auctioned together, including the 24 GHz, 37 GHz, 39 GHz, and 47 GHz bands. As CCA has explained, development and testing of equipment at 39 GHz is approximately equal to that of the 28 GHz and 37 GHz bands and delaying auction of this spectrum will in turn delay service deployment and create a disparity with respect to 28 GHz.[22] This also is true for 37 GHz, which, as a green field band adjacent to 37 GHz, can be readily deployed. While 47 GHz is a higher band, making it available during the same auction as the other bands will inform bidding and allow bidders to move between the various substitutable bands. Expeditiously auctioning the mmW spectrum bands is directly in-line with the goals of this proceeding as it will facilitate investment and innovation to enable the introduction of new technologies and services to the public.

While mmW spectrum is imperative to fostering next-generation technologies, these transmissions have a much shorter range than low-band spectrum. Therefore, carriers need access to additional spectrum resources as well. Accordingly, the Commission should expeditiously conclude its further inquiries in the 3.5 GHz proceeding and promptly move 3.5 GHz spectrum into the marketplace in a manner that promotes investment and innovation from a variety of stakeholders.

Infrastructure. CCA applauds the FCC's recent work to streamline the historic and environmental review processes,[23] and encourages the FCC to expeditiously address remaining barriers to state and local siting processes to further deploy next-generation and 5G technologies.[24] Specifically, CCA urges the FCC to limit impermissible local fees to

[22] Indeed, the 39 GHz band in particular has emerged as uniquely important due to the enormous amounts of contiguous bandwidth available and existing licensing regime.

[23] *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, Second Report and Order, WT Docket No. 17-79 (rel. Mar. 30, 2018).

[24] Comments of Competitive Carriers Association, WT Docket No. 17-79 (filed June 15, 2017).

nondiscriminatory, publicly-disclosed actual costs, and shorten shot clocks for collocations and other deployments, which will allow competitive carriers to make a better business case for deployment and reduce incidents of exorbitant fees. Removing such barriers will streamline the siting process, paving the way to provide the backbone for new technologies and services.

USF Reform. In addition to spectrum and infrastructure access, Mobility Fund II ("MF-II") support is necessary for carriers to deploy, maintain, and upgrade mobile broadband networks in underserved and hard-to-serve areas. While CCA supports the Commission's efforts to implement MF-II, additional actions must be taken to ensure the challenge process data "is reliable, accurately reflects consumer experience in the challenged area, and can be analyzed quickly and efficiently."[25] Notably, CCA urges the FCC to grant the Rural Wireless Association's ("RWA's") request to modify the MF-II challenge process by increasing the grid cell size from one square kilometer with a 400 meter buffer to one square mile with a quarter mile buffer radius for eligible area challengers.[26] Without this modification, the challenge process will leave significant rural areas of the country impossible to challenge – creating an even larger digital divide than exists today. If the FCC wishes to take action to facilitate the introduction of new technologies and services, it cannot leave behind a large sector of the country. The Commission must correct this issue as soon as possible to ensure funding is appropriately targeted to the areas that need it the most.

In conclusion, CCA supports the Commission's efforts to explore ways that Section 7 may be implemented to further encourage innovation and the deployment of next-generation

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[25] *Comment Sought on Mobility Fund Phase II Challenge Process Procedures and Technical Implementation*, Public Notice, WC Docket No. 10-90 & WT Docket No. 10-208, DA 17-1027 (rel. Oct. 18, 2017) ("*Challenge Process Public Notice*").

[26] Application for Review of the Rural Wireless Association, Inc., WC Docket No. 10-90, WT Docket No. 10-208 (filed March 29, 2018).

technologies. But the FCC must do so in parallel with existing procedures aimed at facilitating new technologies, rather than replacing, hindering or delaying such measures.

Respectfully submitted,

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